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BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

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PUBLIC UTILITIES COMMISSION

In the Matter of	)	
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HAWAIIAN ELECTRIC COMPANY, INC.	)	Docket No. 05-0069
	)	
For Approval and/or Modification of	)	
Demand-Side and Load Management	)	
Programs and Recovery of Program	)	
Costs and DSM Utility Incentives.	)	
	)	

STATEMENT OF POSITION

ON HAWAII RENEWABLE ENERGY ALLIANCE'S

SEAWATER AIR CONDITIONING PROJECT

AND

CERTIFICATE OF SERVICE

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enlarge the time for it to respond to IRs to September 22, 2006, and the time for all parties to submit their position statements on Hearing Exhibit 2 to October 6, 2006. On September 29, 2006, HREA filed Errata Sheets Regarding Post-Hearing Information Requests from Life of the Land, HECO/MECO/HELCO, and the Consumer Advocate on HREA Hearing Exhibit No. 2, filed on September 22, 2006. On October 3, 2006 a request for a Protective Order was filed with the Commission. The Parties are awaiting the issuance of the Protective Order by the Commission. Following the issuance of the Protective Order, HREA intends to file certain confidential information in response to the IRs.

I. SUMMARY OF HREA'S SWAC PROJECT PROPOSAL

HREA's proposed SWAC system will deliver chilled water from a centralized district cooling plant to downtown buildings, eliminating the buildings' need to use its existing air conditioning compressors and cooling towers. (It is not clear whether a building would retain these facilities for use as back-up.) The chilled water is a result of cold seawater that is pumped from the bottom of the sea (i.e., at a depth of 1,600 to 3,000 feet in Hawaii) and is passed through a heat exchanger (and in some cases, is chilled to a lower temperature through the use of conventional electrically operated air conditioning compressors). HREA is requesting that (1) prescriptive rebates equal to $500/ton replaced at the building to be paid to customers who hook up to the SWAC system; and (2) the annual maximum rebate amount to per customer be increased to $500,000 from the current $250,000 per customer. The proposed $500/ton prescriptive rebate would be

greater than the rebate that would be generally available though the CICR Program. Preliminary analysis by HECO indicates that the per ton rebate available through the CICR Program would be between approximately $150/ton and $230/ton.

HREA states that "(t)he proposed rebates will be used to offset interconnection costs and will increase the likelihood that customers will connect to the SWAC systems"[1]. HREA suggests the increased rebate is warranted for the following reasons, among others: (1) the price of oil and the cost of electricity have substantially increased since the CICR Program formula was developed; (2) the CICR rebate is more that 10 years old and has not been adjusted to reflect higher net present value of avoided demand and energy; (3) based on a comparative analysis of current customer energy and demand requirements for conventional air conditioning and the savings achieved through SWAC, the estimated rebate under the CICR Program for SWAC would be in the range of $200 - $250/ton; and (4) the current rebate is less than the equivalent rebate provided for solar water heating systems. (See HREA Hearing Exhibit 2, page 2.)

In Hearing Exhibit 2, HREA requested that rebates be paid from HECO's CICR Program. At page 3 of Hearing Exhibit 2, HREA states: "(n)otwithstanding the fact that HECO currently provides a variety of rebates to a variety of technologies in its other programs, HREA understands that inclusion of SWAC in the CICR would be more appropriate than any of the other CI-DSMs." However, in HREA's response to HECO's IRs, filed on September 22, 2006, HREA now recommends that the rebates be paid from

[1] HREA Hearing Exhibit 2, page 1.

HECO's CIEE Program rather than from HECO's CICR Program (see HREA response to post-hearing IRs, filed September 22, 2006 at pages 8-9). HREA states: "(b)ased upon a comparative analysis of these two existing commercial and industrial DSM programs, however, SWAC is more appropriately placed in the Commercial and Industrial Energy Efficiency ("CIEE") Program. HREA is not requesting that a special program be created for SWAC, only that SWAC be placed in a program that will provide the appropriate level and type of rebate for this technology."

HREA further contends in Hearing Exhibit 2 that 25,000 tons of SWAC would reduce HECO's daytime system demand by 16 MW.

II. HECO'S POSITION ON HREA'S PROPOSED SWAC PROJECT

HECO supports HREA's efforts to establish a SWAC system on Oahu. In fact, HECO has offered its headquarters building located at 900 Richards Street as a potential site for the system. HECO also agrees with HREA that sea water air-conditioning, if shown to be cost effective, should be eligible for demand-side management ("DSM") program rebates. However, HECO maintains that the rebate should be covered under HECO's CICR Program, as opposed to the CIEE program.

The CICR Program was designed to encompass the installation of energy efficient equipment not specifically identified in any of the other prescriptive DSM programs. These include DSM measures that are not widely available in the market and where HECO does not have previous experience documenting the measure savings. As discussed in HECO T-11, Docket No. 04-0113, at page 32, "(t)his program was

developed to address the large number of DSM measures that are available, which, due to the limited potential size of the market for these measures or to the site-specific savings resulting from their installation, do not lend themselves to a prescriptive rebate program design. These measures include the redesign of air conditioning systems and the installation of controls on various energy using systems." HECO T-11, at page 33, further notes that "(t)he CICR Program applications typically require pre-monitoring of a facility prior to the installation of the energy efficiency measure, and post-monitoring after the device has been installed and is operational".

The CICR Program also has provisions that require an independent third party review the proposed project if the rebate is projected to be greater than $25,000. This provision enhances the validity of impact results from more complicated projects.

HREA takes the position in Hearing Exhibit 2 that the rebate level in the CICR program should be adjusted because, among other reasons: (1) the price of oil and the cost of electricity have substantially increased since the CICR formula was developed; (2) the rebate is more than 10 years old and has not been adjusted to reflect the higher net present value of avoided demand and energy; (3) based on a comparative analysis of current customer energy and demand requirements for conventional air conditioning and the savings achieved through SWAC, the estimated rebate under the CICR program for SWAC would be in the range of $200 - $250/ton; and (4) the current rebate is less than the equivalent rebate provided for solar water heating systems. (See HREA Hearing Exhibit 2, page 2.)

The appropriate rebate level is not based on the price of oil or the cost of electricity, without consideration of other factors. In fact, higher electricity prices should make energy efficiency measures more cost-effective for participants, which can reduce the need for utility rebates. In DSM program design, one of the key considerations utilized to set customer rebate levels is to set them at levels that are necessary to motivate customers to adopt cost-effective DSM measures (i.e., move the market) and not necessarily on the basis of participant costs or on the basis of avoided capacity value. The $0.05/kwh and $125/kw rebate levels in the CICR Program have resulted in excellent customer response. In fact, in five out of the last six years, HECO's CICR Program has exceeded its program budgets for customer rebates. Therefore, HECO considers the level of customer response in this case to be an indication that the existing rebate levels are more than sufficient to support program participation and that there is no basis for selecting different rebate levels.

Ratepayer funded DSM programs need to strike a balance between offering customer rebates to motivate customers to install energy efficient measures and/or adopt new technologies versus overpaying rebates and/or providing rebates to customers who would have installed the energy efficiency measure even without a utility DSM program. If HECO were to increase its CICR Program rebate level, ratepayers could end up paying more than is necessary to customers who are already being sufficiently encouraged to install DSM measures under the current rebate levels.

Under the provisions of the CICR Program, HECO would pay rebates to customers who connect to the SWAC system an rebate based on $125 per kW reduced, plus $0.05 per kWh for the projected annualized energy savings. Expression of the rebate in terms of $/ton of cooling eases the understanding of the monetary value of the customer rebate, but is dependent on the efficiency of the full SWAC system. Information provided by HREA in response to HECO's IRs was not sufficient to perform a complete analysis of the efficiency of the proposed SWAC plant. Therefore, a precise conversion of the CICR Program customer rebates into a $/ton estimate could not be made. However, HECO's preliminary analysis indicates that the rebate would be between approximately $150/ton and $230/ton.

If additional information is provided by HREA that indicates the level of rebate is inadequate to move the market, i.e., if HECO found that the SWAC project returns were marginal at the current levels of CICR Program customer rebates, HECO would conduct additional analysis to evaluate if a higher rebate may be warranted and would then seek Commission approval for a rebate level for the SWAC technology greater than the CICR Program rebate for other customized energy efficiency measures. In addition, rebates could be still be considered for SWAC even if it did not pass the TRC test. (For example the REWH Program design and customer rebates for solar water heating take into consideration the equity of offering substantial opportunities to residential customers to participate in DSM programs. The Commission may choose to consider other potential benefits of the SWAC systems.) However, before either of these options could be

considered, HECO would need more information regarding the project economics from the perspective of SWAC customers to ensure that the additional rebate is necessary to move the market and not just adding to the profits earned by the project.

HREA's contention that the CICR Program rebate is not as high as HECO's rebate for solar water heating systems, in terms of peak capacity reductions, is true. However, solar water heating systems are currently one of the few major energy conservation measures of which residential customers can take advantage. Water heating in Hawaii is the end use that uses the most electricity in homes that do not have air-conditioning. In contrast, commercial and industrial customers have many alternative cost-effective technologies available to them to effect energy efficiency. Thus, for customer equity and consistency with HELCO and MECO reasons, and because the federal residential solar water heating tax credit expires at the end of 2007 (unless extended by Congress), HECO has proposed to increase the residential solar water heating rebate to $1000 from $750, as stated on pages 44 and 45 of HECO's Final Statement of Position.

At the Energy Efficiency Docket hearings, HREA indicated that the purpose of its proposed $500/ton rebate is to offset interconnection costs, thereby increasing the likelihood that customers will connect to the SWAC system.[2] However, in HREA's oral testimony presented at the panel hearings, Mr. Rezachek, when questioned about the rebate per ton, stated "(a)s I said, our estimated cost of interconnection is about $300."

[2] When asked by HECO legal council and the Commission's moderator how the rebate was developed and whether it should be adjusted downward because of better project economics due to increased electrical rates, HREA replied "(t)he rebate is actually calculated to offset the cost of the interconnection

(See Transcript of Proceedings Volume II, at page 487, lines 1-2.) Therefore, it is not clear, either in the documents provided by HREA or in their panel hearing testimony, why the rebate request should not be $300/ton rather than the $500/ton requested by HREA if the proposed rebate is based on the customer's interconnection cost.

In HREA's response to HECO's IRs, it recommended that the rebate be paid from HECO's CIEE Program rather than from HECO's CICR Program (see HREA response to post-hearing IRs, filed September 22, 2006 at pages 8-9). HREA maintains that "the CIEE program is more appropriate for SWAC than the CICR Program because there is already a High Efficiency Cooling ("HE Cooling") component to the CIEE program. This HE Cooling component already deals with more efficient chillers in commercial and industrial applications."

However, in HECO's CIEE Program, rebates for high efficiency chillers are based on how much a chiller exceeds an efficiency benchmark. For example, super efficient chillers get a higher rebate per ton than chillers that just meet the efficiency benchmark. Generally, the rebates range between $20/ton and $55/ton and are significantly less than what HREA is requesting.

In its Hearing Exhibit 2, HREA states that: "(e)ach 25,000 ton SWAC system helps HECO avoid up to 16 megawatts of additional demand of electricity production." However, this statement may be correct at the time of the aggregate customer demand peak, but it is not correct for HECO's system peak demand. The customers' peak demand

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cost, which is a major concern to our potential customers." (See Transcript of Proceedings Volume II, at page 490, lines 6-9.)

occurs during the day, while HECO's annual demand peak occurs in the evening, during the period between 5 PM and 9 PM. Thus, HECO estimates that the SWAC system (assuming it reduced the daytime peak by 16 MW, as SWAC estimated) would reduce HECO's peak demand by approximately 8 MW. In the absence of the SWAC system, it is likely that some of this 8 MW would still be achieved as customers replace aging equipment and convert to more efficient equipment in order to receive the rebates through HECO's other DSM programs.

In summary, it is HECO's position that SWAC should be promoted under HECO's CICR Program, which was specifically designed for emerging technologies, measures where the savings may vary by site and where HECO does not have previous experience documenting the savings. Within the CICR Program, rebates are based on $125 per kW of demand reduced and $0.05 per kWh of annualized energy saved. HECO's preliminary analysis indicates that for HREA's SWAC project this would equate to about a rebate between approximately $150/ton and $230/ton. Within the CICR Program, projects where the rebate is projected to be more than $25,000 are reviewed by outside third party professional engineers for reasonableness.

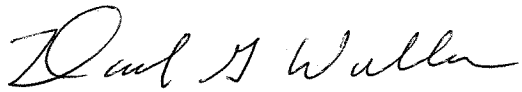
HREA's SWAC project has the potential to provided significant levels of renewable energy on Oahu to help meet the State's Renewable Portfolio Standard. The timeframe in which the energy savings can reasonably be expected are uncertain at this time, in part because information regarding SWAC's schedule (including the time required to sign up customers and to obtain bond financing, do environmental reviews,

obtain needed permits, order equipment for and install the SWAC plant and distribution system) has not yet been provided. Pending receipt of additional information, it also is uncertain as to how cost-effective (from a TRC test perspective) are SWAC systems, and what levels of DSM support above the current CICR Program level may be necessary or appropriate (given the forms of support, such as tax incentives and special purpose revenue bonds) available to SWAC.

III. CONCLUSION

Based on the available information, HECO respectfully requests that the Commission: 1) not adopt HREA's request to establish a prescriptive $500/ton rebate for seawater air conditioning district cooling systems in this proceeding, and 2) allow HECO to provide rebates for seawater air conditioning district cooling systems through its CICR Program in accordance with the provisions that govern that program. Pending HREA's filing of supplemental information deemed confidential by HREA, to be provided under a Commission issued protective order, HECO may supplement this Statement of Position and/or further address this matter in its Opening Brief, scheduled to be filed on October 25, 2006.

DATED: Honolulu, Hawaii, October 6, 2006



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CERTIFICATE OF SERVICE

I hereby certify that I have this date served a copy of the foregoing Statement of Position upon the following parties, by causing a copy hereof to be mailed, postage prepaid, and properly addressed to each such party.

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